



# CURRICULUM AND ASSESSMENT MAP

**SUBJECT** Technology

## SUBJECT VISION:

At Kingsbury High School we are committed to delivering a curriculum accessible to all, which provides the broadest possible range of opportunities for students. One which will allow students to become self-motivated and confident learners, who can work independently and as part of a team. We aim to ensure that learners develop technical and practical competencies as well as the wider skills valued by employers. Our main priority is for students to be problem solvers who are not afraid of making mistakes. We hope our students will become responsible citizens who make a positive contribution to society.

We firmly believe that students learn best by 'doing' and by allowing them to experiment and take risks, in a safe and positive learning environment. This is achieved through imaginative teaching that embraces new technologies and resembles modern industrial processes, whilst retaining the best of traditional practices. At the heart of this, is the desire to deliver a curriculum in which students produce high quality and creative outcomes.

YEAR 7	Unit 1	Unit 2	Unit 3
<b>CONTENT</b>	Desk Organiser	Computer Aided Design	Prototype Fan
<b>SKILLS</b>	Understanding safe working practises using both hand and machine tools. Marking, measuring, cutting, drilling painting, joining, gluing and assembling. Knowledge and understanding of materials, processes and tools. Practical maths skills. Sketching both by hand and using computer software to produce realistic 3D drawings.	Develop an understanding of Computer Aided Design and its capabilities and opportunities it has for designers/engineers. To be able to research, analyse, synthesise a design based upon a need. Use CAD package to be able to draw, modify and create shapes and forms, which can be used to create an informative product. To be able to collaborate and share ideas electronically as well as produce hard copies.	Marking, measuring, cutting, drilling, painting, joining, gluing and assembling. Practical Maths skills. Understanding how electronic components can be combined together, joined, thereby producing an effective circuit. Fault finding circuits Testing out ideas to improve the efficiency, safety and sustainability of the prototype product.
<b>ASSESSMENT</b>	Students use peer and self-assessment techniques to help develop strategies for self-improvement. Teachers use both formative and summative assessment methods to judge student progress in accordance with the school's assessment and reporting policy.	Students use peer and self-assessment techniques to help develop strategies for self-improvement. Teachers use both formative and summative assessment methods to judge student progress in accordance with the school's assessment and reporting policy.	Students use peer and self-assessment techniques to help develop strategies for self-improvement. Teachers use both formative and summative assessment methods to judge student progress in accordance with the school's assessment and reporting policy.

### *Useful Resources / Guidance:*

2D design software, Sketchup software, [www.dtstudent.com](http://www.dtstudent.com).

YEAR 8	Unit 1		Unit 2	
CONTENT	Decorative Vase		Electronic Moisture Detector	
SKILLS	Understanding how to assess and minimise risk when working independently with both hand and machine tools. Design analysis, modelling and presentation of ideas. Marking, measuring, cutting, drilling, painting joining, gluing and assembling. Freehand drawing. Working Drawing (elevations) Isometric drawing and graphical rendering skills to aid communication. Using 3D CAD.		Using software programs to test and develop electronic circuits that can detect real life changes in the environment. Developing skills of soldering. Testing and fault finding a circuit to identify errors which might cause failure Using formal orthographic drawing techniques. Using 3D CAD. Ethical consideration of technology.	
ASSESSMENT	Students use peer and self-assessment techniques to help develop strategies for self-improvement. Teachers use both formative and summative assessment methods to judge student progress in accordance with the school's assessment and reporting policy.		Students use peer and self-assessment techniques to help develop strategies for self-improvement. Teachers use both formative and summative assessment methods to judge student progress in accordance with the school's assessment and reporting policy.	
<i>Useful Resources / Guidance:</i> 2D design software, Sketchup software, www.dtstudent.				

YEAR 9	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
CONTENT	Written Implement Evaluation Of Product	Product Modelling	Wooden Artefact	Wooden Artefact	Environmental Clock	Environmental Clock
SKILLS	Research skills, collecting data, analysis 2D and 3D Drawing, rendering, Isometric drawings, orthographic drawings, Presenting data by hand and CAD. Presentational skills, layout, style and organisation.	Developing ideas focusing on a design style. Using data to inform design CAD/CAM. Developing fluidity of design thinking. Shaping , modelling using cardboard and modification to work, evaluation	Research skills, Working with a context writing a brief Hand rendering 2D and 3D shapes. Isometric drawing by hand and using CAD. Presenting ideas graphically to maximise impact.	Researching design styles. Developing design Construction and building skills, Production of idea, using appropriate techniques	Group work, collaboration of ideas and research, eco-friendly design, sustainable design Material research Formulation of ideas Peer assessment and continuous evaluation	Exploded drawings, 3 <sup>rd</sup> angle Orthographic projection Planning manufacture. Using photography as a medium to communicated thoughts and processes. CAD CAM Sustainability.
ASSESSMENT	Peer and self-assessment Verbal and written feedback Teachers use both formative and summative assessment in accordance with the school's assessment policy.	Peer and self-assessment Verbal and written feedback Teachers use both formative and summative assessment in accordance with the school's assessment policy.	Peer and self-assessment Verbal and written feedback Teachers use both formative and summative assessment in accordance with the school's assessment policy.	Peer and self-assessment Verbal and written feedback Teachers use both formative and summative assessment in accordance with the school's assessment policy.	Peer and self-assessment Verbal and written feedback Teachers use both formative and summative assessment in accordance with the school's assessment policy.	Peer and self-assessment Verbal and written feedback Teachers use both formative and summative assessment in accordance with the school's assessment policy.
<i>Useful Resources / Websites</i> <a href="http://www.technologystudent.com">www.technologystudent.com</a>						

<https://www.bbc.com/bitesize/examspecs/zby2bdm>

<https://www.bbc.com/bitesize/subjects/zfr9wmn>

[www.jamesdysonfoundation.com/](http://www.jamesdysonfoundation.com/)

[www.design-technology.org](http://www.design-technology.org)

[www.nanotechproject.org](http://www.nanotechproject.org)

[www.sda-uk.org](http://www.sda-uk.org)

[www.howstuffworks.com](http://www.howstuffworks.com)

[www.ergonomics4schools.com](http://www.ergonomics4schools.com)

<https://www.sketchup.com>

[https://www.ruthtrumpold.id.au/destech/?page\\_id=1744](https://www.ruthtrumpold.id.au/destech/?page_id=1744)

[https://www.youtube.com/watch?list=PLT9SNo7sZaLfsKJ-OkM-RR5am3ggyrсс&time\\_continue=264&v=2L4B-Vpvx1A](https://www.youtube.com/watch?list=PLT9SNo7sZaLfsKJ-OkM-RR5am3ggyrсс&time_continue=264&v=2L4B-Vpvx1A)

<http://www.technologystudent.com/PDF4/mats1.pdf>

<b>YEAR 10</b>	<b>Autumn 1</b>	<b>Autumn 2</b>	<b>Spring 1</b>	<b>Spring 2</b>	<b>Summer 1</b>	<b>Summer 2</b>
<b>CONTENT</b>	Chessboard And Pieces Project	Theory Module	Toast Rack And Tongs Lamination Project	IKEA Storage Project	IKEA Storage Project	Major Project - Component 1
<b>SKILLS</b>	Identifying design opportunities from an open contextual scenario. Consideration of manufacturing techniques and environmental concerns. 6R's. Exploring ideas using a wide variety of graphical techniques including CAD. Consideration of CAM systems.	Production planning. Scales of production. Products in society. Forms of energy and generation-renewable energy. Systems, levers and motion. Automation in industry. Modern, smart and composite materials. Sustainability and the environment. Obsolescence and design for maintenance. Material	Exploring works of others- case studies. Researching appropriate materials and manufacturing methods in industry. Production of jigs and templates. CAD and CAM used to manufacture jigs. Lamination process. Shaping and forming materials. Systems and levers investigation. Vacuum forming and making of product.	Contextual design brief, offering both stretch and challenge. Working in teams. Using collaboration in a real world environment. Intensive /focused on using CAD and CAM. Precision measurement/tolerance to .001mm Sustainability, 6R's. Consideration of appropriate materials.	CAD and CAM to manufacture products. Group work in completing the making of the products. Testing and evaluation stages addressed for AO5 in curriculum.	Design Context Design Brief Task Analysis Preliminary Research. Product Analysis Questionnaire Client Profile and Target Criteria/Specification Further Research: Materials/NET/Collecting & Analysing Date

		properties. Quality control and assurance.	Use of CAD to illustrate/communicate ideas.	Joint drawing. Making of jigs. Commercial use of machines in applying finishes.		
ASSESSMENT	Peer and self-assessment Verbal and written feedback Teachers use both formative and summative assessment in accordance with the school's assessment policy.	Peer and self-assessment Verbal and written feedback Teachers use both formative and summative assessment in accordance with the school's assessment policy.	Peer and self-assessment Verbal and written feedback Teachers use both formative and summative assessment in accordance with the school's assessment policy.	Peer and self-assessment Verbal and written feedback Teachers use both formative and summative assessment in accordance with the school's assessment policy.	Peer and self-assessment Verbal and written feedback Teachers use both formative and summative assessment in accordance with the school's assessment policy.	Biweekly progress tracking. Guidance/assessment given in line with exam board guidance.

*Useful Resources / Guidance:*

[www.technologystudent.com](http://www.technologystudent.com)

<https://www.bbc.com/bitesize/examspecs/zby2bdm>

<https://www.bbc.com/bitesize/subjects/zfr9wmn>

[www.jamesdysonfoundation.com/](http://www.jamesdysonfoundation.com/)

[www.design-technology.org](http://www.design-technology.org)

[www.nanotechproject.org](http://www.nanotechproject.org)

[www.sda-uk.org](http://www.sda-uk.org)

[www.howstuffworks.com](http://www.howstuffworks.com)

<https://www.kerboodle.com/users/login>

[www.ergonomics4schools.com](http://www.ergonomics4schools.com)

<https://www.sketchup.com>

YEAR 11	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
CONTENT	GCSE Component 2	GCSE Component 3	GCSE Component 3	GCSE Component 4.	Written Exam	
SKILLS	Initial ideas Modelling (2D modelling only) Clear annotation of ideas. Linked to specification points Developed Ideas – 3D	Size, construction and material properties identified Plan of making manufacturing specification or diary Working drawing/ Net with	Photographs of each part being developed/made  Design Realisation and manufacturing  On-going modification.	Quality Control/Assurance Testing Against the Specification Refer to your original specification in criteria 2.  Photographs of the final product in use.	Intensive, focused preparation for the written paper. Theory knowledge, skills, processes and techniques, materials and properties covered.	

	Modelled using cardboard or other soft materials Clear stages of development becoming more sophisticated towards completion. Sustainability, 6 R's.	dimensions/exploded or sectional drawings Cutting List.  Design Realisation and manufacturing	Review	Third party opinion.  Design Modification/Improvements	Design based questions considered. Past papers Revision strategies, tips and support	
ASSESSMENT	Biweekly progress tracking. Guidance/assessment given in line with exam board guidance.	Biweekly progress tracking. Guidance/assessment given in line with exam board guidance.	Biweekly progress tracking. Guidance/assessment given in line with exam board guidance.	Biweekly progress tracking. Guidance/assessment given in line with exam board guidance.	All exam work is internally marked and externally modified. Official exam grade. (60% of total GCSE grade)	

*Useful Resources / Guidance:*

Download specimen question papers and mark schemes from the AQA website.

Use the new specification to check the subject matter that will be tested in each exam and revise accordingly.

<https://filestore.aqa.org.uk/resources/design-and-technology/specifications/AQA-8552-SP-2017.PDF>

<https://www.bbc.com/bitesize/examspecs/zby2bdm>

[http://www.technologystudent.com/despro\\_fish/NEW\\_GCSE3.html](http://www.technologystudent.com/despro_fish/NEW_GCSE3.html)

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